DOCUMENT RESUME

ED 121 103 FL 007 590

AUTHOR Toler, Sue Anne; Bankson, Nicholas W.
TITLE Utilization of an Interrogative Model to Evaluate Mother's Use and Children's Comprehension of Question Forms.
PUB DATE Nov 75
NOTE 25p.; Paper presented at the Convention of the American Speech and Hearing Association, (Washington, D.C., November, 1975)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage
DESCRIPTORS *Child Language; *Language Development; Language Research; *Language Usage; Models; Mothers; *Parent Child Relationship; Preschool Children; Psycholinguistics; *Syntax; Verbs

ABSTRACT

A study was conducted to determine the efficacy of utilizing Leach's interrogation model as a means for analyzing question types used by mothers and their children's responses to various interrogative forms. Data analyzed consisted of language samples obtained from three preschool children and their mothers during mother-child interactions plus each child's responses to a 90-item probe containing questions representing the 15 question forms delineated by the model. The interrogation model was an effective and reliable tool in the analysis of data. The question forms most frequently used by the mothers were (1) wh-interrogative nominal segment, (2) auxiliary + no infinitive, and (3) tag questions. All three subjects displayed similarities of performance in response to wh-interrogative nominal segment and auxiliary + no infinitive questions. Two of the subjects appeared capable of appropriately answering all of the question forms tested during the interrogative probe. Similarities of performance during the mother-child interaction and the interrogative probe were found to exist for two of the three subjects in certain categories. A high percentage of the questions posed by the mothers during the mother-child interactions were of forms which their children consistently answered appropriately during the interrogative probe. (Author)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED121103

Utilization of an Interrogative Model to Evaluate Mother's Use and Children's Comprehension of Question Forms

Sue A. Toler
Anne Arundel County Public Schools
Annapolis, Maryland

Nicholas W. Bankson
University of Maryland
College Park, Maryland

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

FL007590

Correspondence should be addressed to:

Nicholas W. Bankson, Ph.D.
Department of Hearing and Speech Sciences
University of Maryland
College Park, Maryland 20742
(301) 454-2546

A study was conducted to determine the efficacy of utilizing Leech's interrogation model as a means for analyzing question-types used by mothers and their children's responses to various interrogative-forms. Data analyzed consisted of language samples obtained from three preschool children and their mothers during mother-child interactions plus each child's responses to a 90 item probe containing questions representing the 15 question-forms delineated by the model.

The interrogation model was an effective and reliable tool in the analysis of data. The question-forms most frequently used by the mothers were (1) wh-interrogative nominal segment, (2) auxiliary + no infinitive, and (3) tag questions. All three subjects displayed similarities of performance in response to wh-interrogative nominal segment and auxiliary + no infinitive questions. Two of the subjects appeared capable of appropriately answering all of the question-forms tested during the interrogative probe. Similarities of performance during the mother-child interaction and the interrogative probe were found to exist for two of the three subjects in certain categories. A high percentage of the questions posed by the mothers during the mother-child interactions were of forms which their children consistently answered appropriately during the interrogative probe.

Tutor

Historically, the bulk of the literature and research related to interrogative development has dealt with the acquisition of questioning behavior in children's speech (Stern, 1924; Fahey, 1942; Bellugi, 1965; Brown, 1968). Some investigators have studied the percentage of questions in the speech of young children (Smith, 1933; Davis, 1937; Templin, 1957), and others have developed various interrogative classification systems (Piaget, 1926; McCarthy, 1930; Dale, 1972; Lewis, 1972). Recent investigators have analyzed the ability of children to answer interrogatives posed by adults (Ervin-Tripp, 1970; Cooper, 1971; Chapman, 1972). Few investigators, however, have systematically analyzed the types of interrogatives used by adults in relationship to the capability of children to answer those interrogative forms appropriately. This relationship is important when one considers that in order for effective communication to occur between an adult and a child, the adult must monitor his communication to stay within the parameters of the child's language processing abilities. If these parameters are violated, it is likely that communication between the adult and the child will be interrupted.

Adult questions contain features which impose various types of constraints on verbal communication between the adult and the child. One such feature to observed when the appropriate response class is determined by the syntactic construction of the preceding question. For example, "It's a beautiful day, isn't it?" is a declarative statement followed by a tag element which encourages a "yes" or "no" response. In addition, referential constraints which refer to an information source accompany syntactic constraint features. The question "What is this?" requires a stimulus object in the immediate environment. However, for a question such as "Do you like chocolate?" the presence of a stimulus object is optional. Another type of referential feature variation of interrogatives is related to the

means of designating the antecedent. Some questions such as "What is that?" may require a nonlinguistic designating behavior such as a nod or gesture, while questions such as "What do you have to put together?" contain the linguistic designating information.

Leach (1972) proposed a method for categorizing adult interrogatives on the basis of syntactic constructions which maintain question-type and upon the nature of appropriate responses. She established the basic form of the question types, acceptable variations of each form, and examples which each question-form makes an appropriate or expected (table 1). In an attempt to explore the efficacy of using this method as a means of categorizing question forms, Leach analyzed seven mother-child interactions and reported that there was a shift in the adult interrogatives from a concentration in a few categories among the younger subjects to a wide-ranging distribution pattern among the older subjects. The question classes in receiving the largest proportion of questions among the younger subjects in this investigation I (general segment), CI (verbal segment), and C, C, and I (confirmation or tentative responses). Leach reported that naming as activity, responding yes or no, and imitating are typical responses of children at the pre-reading language. A significant occurrence of questions in these categories can also found with the older children as well as increasing evidence of questions in categories R (special lexical), SR (adjunctive segments), and CI combinations. It may be inferred from the results that the cognitive growth gained as a child by an adult change in relation to child-adult's learned language capability.

This study was an attempt to explore the effectiveness and reliability of Leach's (1972) interrogative model as a means of studying parental questions and children's responses to various interrogative forms. Since the various

of used to avoid the following specific questions were asked to this study: Objectives: (1) What of the selective happiness of the question-types used to authors during a author-child conversation? (2) What question-types are responded to appropriately by subjects during the author-child conversation? (3) Can types of questions are assessed appropriately by the subjects that possessed into an investigative probe which includes all the question sets given described to the author? (4) What similarities and differences exist between responses during the author-child conversation and the investigative probe? and (5) What explanations and differences exist between the question categories used by authors and the children's responses as assessed by the investigative probe?

Analyzing the Language Samples

Three children between three and six-half to four years of age and three authors participated in the investigation. As indicated in Table 1, all of the children had normal speech and language skills for their age as evidenced by the test scores on the (1) Peabody Picture Vocabulary Test, (2) the Developmental Sentence Scoring Test, and (3) the Arizona Articulation Proficiency Test. In addition, each subject had passed hearing as determined by pure tone screening at 15 dB ISO for the frequencies of 500 Hz, 1,000 Hz, 2,000 Hz, and 4,000 Hz.

To provide the subjects with an opportunity to respond to all of the question types mentioned to each, a 15 item investigative probe was prepared and administered. The probe was comprised of a picture stimulus which would permit one representative question for each of seven to thirteen investigative categories. One each investigative category the presentation of a picture stimulus was followed by one questions. For example, to elicit responses to

interrogative verbal segment) questions.

When considering the three subjects as a group it was found that for most question categories the subjects performed better during the interrogative probe than during the mother-child interaction. The analysis of data relating to the comparison of question categories to which the subjects responded appropriately during the mother-child interaction and the interrogative probe was complicated by the factors discussed in the previous question concerning the child's appropriate responses during the mother-child interaction.

Comparison of Mother's Interrogatives and Child's Responses to the Interrogative Probe

The final question of this investigation compared the types of interrogatives utilized by the mothers during the mother-child interaction and the question-types which the children responded to appropriately during the interrogative probe. Analysis of data obtained through the utilization of Leach's classification system revealed that for all three subjects the mothers' questions were of an interrogative form which the subjects answered correctly at least four out of six times during the interrogative probe. This indicated that the mothers utilized questions which according to the probe the children were capable of answering.

Efficacy of the Model

Initially Leach's model was employed to classify mothers' questions posed during the mother-child interactions. Each of the three judges was able to assign a category number to all questions listed in the corpora. Even though no formal training was afforded the judges, high inter-judge reliability scores for the item by item analysis were obtained. It appeared that while using Leach's model judges were able to agree on the appropriate classification of most of the mothers' questions.

Leach's interrogation classification system also provides response constraints for each of the fifteen question categories which enabled the judges to determine whether a child's response was syntactically appropriate or inappropriate. Each subject's responses to the questions posed by his mother and those presented during the interrogative probe were analyzed according to the stated criteria. The high inter-judge reliability scores obtained during item by item analysis indicated that the judges were able to agree as to whether a response was syntactically appropriate or inappropriate.

The design of the interrogative probe employed in this investigation was based on the format utilized by Leach in his system. Following the basic form variations and examples defined in the construct, the investigators were able to formulate questions of a specific type which related to each stimulus picture presented during the probe. Each child was then afforded the opportunity to respond to all 15 question-types during the administration of the interrogative probe.

Utilization of Leach's model in classifying the questions and responses contained in the corpora enabled the authors to investigate relationships between data obtained under two conditions. First, it was possible to compare the question-types which each subject answered appropriately during the mother-child interaction with those to which he responded appropriately during the interrogative probe. Secondly, it was possible to compare the types of mother's questions posed during the mother-child interaction with the child's appropriate responses given during the interrogative probe.

In summary, Leach's interrogati classification model proved to be a reliable and effective system utilized in all phases of this investigation. The judges were able to classify both questions and responses with high reliability while the investigators found the model to be a useful tool in analyzing the obtained data.

Implications

Several diagnostic and rehabilitative implications may be derived from this investigation. First of all, the interrogative probe which was developed from Leach's interrogation classification model has the potential for being a useful diagnostic tool to identify the question-forms which a child is unable to comprehend or respond to appropriately. Remediation programs could be devised on the basis of such information.

The interrogative probe may gain further utility by administering it to a significant number of children to obtain normative data. Cross sectional and longitudinal studies could be conducted to gather data which could be a helpful adjunct to diagnostic and remediation procedures. By utilization of a longitudinal study which obtained the same measures at regular intervals over a specified period of time or developmental stages one could investigate changes in questioning and responding patterns of mothers and children.

In addition, an analysis of the interrogative-types used by a child's parents and a comparison with the forms answered appropriately by the child during the interrogative probe could yield insight into the appropriateness of certain parental question-types. Modification of the parents' behavior regarding questioning activity in the home could be a helpful adjunct to clinical treatment.

An alternative to the methods by which the mother-child interactions were conducted in this investigation would be to cue mothers so that interaction sessions would include a more systematic coverage of various question forms rather than simply leaving this variable to chance. This, of course, would eliminate some of the spontaneity of the interaction, but would allow for more definitive answers to the questions raised in this study. Gathering language samples from varying environments would also be of interest.

On the basis of our investigation it appears that the questions raised

as well as the procedures utilized in this study could profitably be further explored. In addition, the investigators found Leach's model to be a useful system for the analysis of questioning behavior of parents as well as children.

References

Bellugi, U., The development of interrogative structures in children's speech. In K. Riegel (Ed.), The Development of Language Functions. University of Michigan Language Development Program, Report No. 8 (1965).

Brown, R., The development of wh-questions in child speech. J. Verb. Learn. Verb. Behav., 7, 279-290 (1968).

Chapman, R. S., The development of question comprehension in preschool children. Paper presented at the Annual Convention of the American Speech and Hearing Association, Detroit, Michigan (1973).

Dale, P. S., Language Development: Structure and Function. Hinsdale, Illinois: The Dryden Press, Inc. (1972).

Davis, E. A., The Development of Linguistic Skill in Twins, Singletons with Siblings, and Only Children from Age Five to Ten Years. Minneapolis: University of Minnesota Press (1937).

Ervin-Tripp, S., Discourse agreement: How children answer questions. In J. Hayes (Ed.), Cognition and the Development of Language. New York: John Wiley and Sons, Inc. (1970).

Fahey, G. L., The questioning activity of children. J. Gen. Psychol., 60, 337-357 (1942).

Hooper, R., Communicative development and children's responses to question. Speech Monogr., 38, 1-9 (1971).

Leech, E., Interrogation: A model and some implications. J. Speech Hearing Dis., 37, 33-44 (1972).

Lee, L., Developmental sentence scoring: A clinical procedure for estimating syntactic development in children's spontaneous speech. J. Speech Hearing Dis., 34, 313-340 (1971).

McCarthy, D., The Language Development of the Preschool Child. Minneapolis: University of Minnesota Press (1930).

Piaget, J., The Language and Thought of the Child. London: Routledge and Kegan Paul Ltd. (1926).

Smith, M. E., The influence of age, sex and situation on the frequency, form, and function of questions asked by preschool children. Child Develop., 4, 205-213 (1933).

Stern, W., Psychology of Early Childhood. New York: Holt and Company (1930).

Templin, M. C., Certain Language Skills in Children. Minneapolis: University of Minnesota Press (1957).

Table 3. [illegible] Question Classification Model.

Question Classes	Basic Form	Form Variations	Response Expectation	Examples
Tag Question	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Questions d'examen	Texte-Texte	Texte-Vocabulaire	Questions grammaticales	Exemples
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Author(s) and Publication	Study Design	Study Participants	Intervention	Conclusions
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]